

[042] What is claimed is:

1. A method for providing position assist information from a base station, comprising:  
receiving GPS satellite information; and  
transmitting the received GPS satellite information to a GPS enabled device.
2. The method of claim 1, wherein the GPS satellite information is received periodically.
3. The method of claim 1, further comprising periodically locating GPS satellites, wherein the GPS satellites information is periodically received from the located GPS satellites.
4. The method of claim 3, further comprising processing the received GPS satellite information and transmitting the processed information to the GPS enabled device.
5. The method of claim 1, further comprising periodically receiving the GPS satellites information from a position determination entity.
6. The method of claim 1, further comprising transmitting the information to the GPS enabled device each time the GPS enabled device registers with the base station.

7. The method of claim 1, wherein the transmitted information includes access assist information.

8. The method of claim 1, wherein the transmitted information includes sensitivity assist information.

9. The method of claim 1, further comprising receiving decoded position information from the GPS enabled device.

10. The method of claim 9, further comprising determining a position of the GPS enabled device based on the received decoded position information, and transmitting the determined position to the GPS enabled device.

11. The method of claim 9, further comprising:

sending the decoded position information to a position determination entity;

receiving a position of the GPS enabled device determined from the decoded position information from the position determination entity;

and

transmitting the position to the GPS enabled device.

12. A method for receiving position assist information from a base station, comprising:

receiving GPS satellite information from the base station;

storing the received GPS satellite information;

receiving a position request; and

automatically acquiring GPS satellites using the stored information in response to the received position request.

13. The method of claim 12, wherein the GPS satellite information is received periodically.

14. The method of claim 12, further comprising registering with the base station, and receiving the GPS satellite information during the registration.

15. The method of claim 12, further comprising receiving position information from the acquired GPS satellites, and determining a position based on the received position information.

16. The method of claim 12, further comprising:  
receiving position information from the acquired GPS satellites;  
decoding the received position information;  
transmitting the decoded position information to the base station;  
and  
receiving a position determined from the decoded position information from the base station.

17. The method of claim 12, further comprising adjusting a correlation time based on the stored information in order to improve the chances of acquiring the GPS satellites.

18. The method of claim 12, wherein the received information includes access assist information.
19. The method of claim 12, wherein the received information includes sensitivity assist information.
20. A base station, comprising:  
  
a GPS receiver configured to locate, and receive information from, GPS satellites; and  
  
a transmitter configured to transmit the received GPS satellite information to a GPS enabled device.
21. The base station of claim 20, wherein the GPS receiver is configured to locate the GPS satellites periodically.
22. The base station of claim 20, further comprising a processor configured to process the received GPS satellite information, wherein the transmitter is configured to transmit the processed information to the GPS enabled devices.
23. The base station of claim 20, further comprising a network interface configured to interface the base station with a position determination entity, wherein the base station is configured to receive GPS satellites information from the position determination entity through the network interface.

24. The base station of claim 20, further comprising a receiver configured to receive registration requests from the GPS enabled device, wherein the base station is configured to transmit the GPS satellite information in response to the registration request.

25. The base station of claim 20, wherein the transmitted information includes access assist information.

26. The base station of claim 20, wherein the transmitted information includes sensitivity assist information.

27. The base station of claim 20, further comprising a receiver, the receiver configured to receive decoded position information from the GPS enabled device.

28. The base station of claim 27, configured to determine a position of the GPS enabled device based on the received decoded position information, and to transmit the determined position to the GPS enabled device.

29. The base station of claim 27, further comprising a position determination entity, wherein the position determination entity is configured to determine the position from the decoded position information.

30. The base station of claim 27, further comprising a network interface configured to interface the base station with a position determination entity, the base station configured to:

send the decoded position information to the position determination entity through the network interface;

receive a position of the GPS enabled device determined from the decoded position information from the position determination entity through the network interface; and

transmit the position to the GPS enabled device.

31. The base station of claim 20, wherein the transmitter is configured to transmit the received GPS satellite information to the GPS enabled device over a control channel.

32. The base station of claim 31, wherein the control channel is a PCS common control channel.

33. A base station, comprising:

a network interface configured to interface the base station with a position determination entity, the base station configured to receive GPS satellite information from the position determination entity; and

a transmitter configured to transmit the received GPS satellite information to a GPS enabled device.

34. The base station of claim 33, further configured to receive the GPS satellite information periodically or aperiodically.

35. The base station of claim 33, further comprising a processor configured to process the received GPS satellite information, wherein the transmitter is configured to transmit the processed information to the GPS enabled device.

36. The base station of claim 33, further comprising a receiver configured to periodically receive registration requests from the GPS enabled device, wherein the base station is configured to transmit the GPS satellite information in response to the registration requests.

37. The base station of claim 33, wherein the transmitted information includes access assist information.

38. The base station of claim 33, wherein the transmitted information includes sensitivity assist information.

39. The base station of claim 33, further comprising a receiver, the receiver configured to receive decoded position information from the GPS enabled device.

40. The base station of claim 39, further configured to:  
send the decoded position information to the position determination entity through the network interface;

receive a position of the GPS enabled device determined from the decoded position information from the position determination entity through the network interface; and

transmit the position to the GPS enabled device.

41. The base station of claim 33, wherein the transmitter is configured to transmit the received GPS satellite information to the GPS enabled device over a control channel.

42. The base station of claim 41, wherein the control channel is a PCS common control channel.

43. A GPS enabled device, comprising:

a receiver configured to receive GPS satellite information from a base station;

a memory configured to store the received GPS satellite information; and

a GPS receiver configured to automatically acquire GPS satellites using the stored GPS satellite information in response to a position request.

44. The GPS enabled device of claim 43, further comprising a transmitter, wherein the GPS enabled device is configured to transmit a registration request to the base station using the transmitter, and wherein the GPS satellite information is received during the registrations.



45. The GPS enabled device of claim 43, wherein the GPS receiver is further configured to receive position information from the acquired GPS satellites and to determine a position based on the received position information.

46. The GPS enabled device of claim 43, further configured to adjust a correlation time based on the stored information in order to improve the chances of acquiring the GPS satellites.

47. The GPS enabled device of claim 43, further comprising a transmitter, wherein the GPS receiver is further configured to receive position information from the acquired GPS satellites and to decode the received satellite information, and wherein the GPS enabled device is further configured to transmit the decoded position information to the base station.

48. The GPS enabled device of claim 47, further configured to receive a position determined from the decoded position information from the base station.

49. The GPS enabled device of claim 43, further configured to receive the GPS satellite information from the base station over a control channel.

50. The GPS enabled device of claim 49, wherein the control channel is a PCS common control channel.

51. A wireless communication system, comprising:

- a base station, comprising a transmitter configured to transmit GPS satellite information; and
- a GPS enabled device, comprising:
  - a receiver configured to receive the GPS satellite information from the base station;
  - a memory device configured to store the received GPS satellite information; and
  - a GPS receiver configured to automatically acquire GPS satellites using the stored GPS satellite information in response to a position request.

52. The wireless communication system of claim 51, wherein the base station further comprises a GPS receiver configured to acquire, and receive the GPS satellite information from, GPS satellites.

53. The wireless communication system of claim 51, further comprising a position determination entity, wherein the base station further comprises a network interface configured to interface the base station with the position determination entity, and wherein the base station configured to receive the GPS satellite information from the position determination entity through the network interface.

54. The wireless communication system of claim 51, wherein the base station further comprises a processor configured to process the

GPS satellite information, and wherein the base station is configured to transmit the processed information.

55. The wireless communication system of claim 51, wherein the base station further comprises a receiver configured to periodically receive registration requests from the GPS enabled device, and wherein the base station is configured to transmit the GPS satellite information in response to the registration request.

56. The wireless communication system of claim 51, wherein the transmitted information includes at least one of access assist information and sensitivity assist information.

57. The wireless communication system of claim 51, wherein the GPS enabled device further comprises a transmitter configured to periodically transmit a registration request to the base station, and wherein the GPS satellite information is received during the periodic registrations.

58. The wireless communication system of claim 51, wherein the GPS receiver is further configured to receive position information from the acquired GPS satellites and to determine a position based on the received position information.

59. The wireless communication system of claim 51, wherein the GPS enabled device is further configured to adjust a correlation time

based on the stored information in order to improve the chances of acquiring the GPS satellites.

60. The wireless communication system of claim 51, wherein the GPS enabled device further comprises a transmitter, wherein the GPS receiver is further configured to receive position information from the acquired GPS satellites and to decode the received position information, and wherein the GPS enabled device is further configured to transmit the decoded position information to the base station.

61. The wireless communication system of claim 60, wherein the base station further comprises a full position determination entity, and wherein the position determination entity is configured to determine the position from the decoded position information.

62. The wireless communication system of claim 60, wherein the base station further comprises a receiver, the receiver configured to receive the decoded position information from the GPS enabled device.

63. The wireless communication system of claim 62, wherein the base station is further configured to determine a position of the GPS enabled device based on the decoded position information, and to transmit the determined position to the GPS enabled device.

64. The wireless communication system of claim 62, further comprising a position determination entity, wherein the base station

further comprises a network interface configured to interface the base station with the position determination entity, the base station configured to:

send the decoded position information to the position determination entity through the network interface;

receive a position of the GPS enabled device determined from the decoded position information from the position determination entity through the network interface; and

transmit the position to the GPS enabled device.

65. The wireless communication system of claim 51, further comprising a control channel, wherein the GPS enabled device is configured to receive the GPS satellite information from the base station over the control channel.

66. The wireless communication system of claim 65, wherein the control channel is a PCS common control channel.